

40/580560

AP20 Rec'd PCT/PTO 26 MAY 2006

Translation of Amendment under Article 34, PCT

1. Identification of the International Application PCT/JP2004/016838
2. (Formal matter) (Applicant)
3. (Formal matter) (Agent)
4. Objects of Amendment Description and Claims
5. Contents of Amendment As separate sheets
6. Annex
 - (1) Description: page 30 (page 58 of Translation)
 - (2) Claims: pages 33-34 (page 63 of Translation)

5. Contents of Amendment

- (1) In page 30, line 23 in the description (in page 58, line 17 of Translation), "as shown in FIG.18" is amended to "as shown in FIG.17".
- (2) In page 30, line 25 in the description (in page 58, line 18 of Translation), "of FIG.18" is amended to "of FIG.17".
- (3) In pages 33 to 34 in the claims (in page 63 of Translation), claim 18 is cancelled.
- (4) In page 34 in the claims (in page 63 of Translation), claim 19 is cancelled.
- (5) In page 34 in the claims (in page 63 of Translation), claim 20 is cancelled.
- (6) In claim 21 in page 34, line 16 in the claims (in page 64, line 4 of Translation), "as defined in claim 1 or 18" is amended to "as defined in claim 1".
- (7) In page 34 in the claims (in page 64 of Translation), claim 22 is cancelled

-- END --

[0159]

Further, in order to avoid heat interferences between the active regions 30 of the DFB lasers 1, the intervals between the DFB lasers 1 (the pitches of the center positions of the active regions 30) are, for 5 instance, not less than $500 \mu\text{m}$.

[0160]

Finally, as in the aforementioned first embodiment, the p electrodes 18a for the DFB laser and the p electrodes 18b for the monitor PD are formed, and further, n electrodes 23 for the DFB laser 10 and n electrodes 24 for the monitor PD are also formed on the upper surface of the arrayed device 34. By doing this, each DFB laser 1 can be independently and directly modulated from the upper surface of the arrayed device 34.

[0161]

15 (Amended) In the case of the fourth embodiment, since the n electrode 23 for the DFB laser and the n electrode 24 for the monitor PD must be formed connected to the n-InP contact layer 21 as shown in FIG. 18, a letter "h" (the mirror image of "h" in the case of FIG. 18) must be etched out during the etching process performed to change the 20 state shown in FIG. 12 to the state shown in FIG. 13.

[0162]

A DFB laser array light source suitable for CWDM applications can be realized by hybrid-integrating the arrayed device 34 obtained as described above with, for instance, an AWG multiplexer 27 as shown in 25 FIG. 18 so that the total optical output ($\lambda 1$ to $\lambda 4$) can be extracted to

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Amended) A distributed-feedback semiconductor laser wherein an external reflector is provided behind the distributed-feedback semiconductor laser as defined in claim 1.

22. (Cancelled)